

TASK ORDER TEMPLATE

Task Order No. **09**

Title: **Coyote Percolation Dam Replacement**

Agreement: Standard On-Call Consultant Agreement for **Structural Engineering Services** ("Agreement") Between the Santa Clara Valley Water District ("District") and **Biggs Cardoso Associates** ("Consultant"), dated **April 26, 2016**.

District: **Todd Inman, P.E.**

Consultant: **Mahvash M Harms, S.E.**

Dollar Amount of Task Order: Not-to-Exceed \$219,000.00

1. Upon full execution of this Task Order No. **09**, as set forth in the Revised Standard On-Call Consultant Agreement, Section Twelve, subsection 13. Task Orders, and the issuance of a Notice to Proceed by the District Project Manager, the Consultant is hereby authorized to perform the Services described in Attachment A to this Task Order. Any costs incurred, Services performed or expenditures by the Consultant before this Task Order is executed or before the issuance of the Notice to Proceed will be considered outside the contracted Scope of Services and will not be eligible for payment.
2. Both the scope of Services to be performed and the deliverables to be provided in accordance with this Task Order are described in Attachment A which is attached hereto and incorporated by this reference. Attachment A shall include at a minimum the following:
 - A. The Consultant personnel to be assigned to perform the Services, including resumes if not previously provided to the District.
 - B. The total not-to-exceed fees amount for Consultant to complete the Services, including estimated number of hours required to perform the Services assigned to each Consultant classification.
 - C. Estimated cost of each other direct cost and reimbursable expense, including any applicable fees.
 - D. Project schedule for completing the scope of Services.
3. The Consultant shall be compensated at fixed fees or at the hourly rates established in the Agreement, Revised Attachment One to the Scope of Services, Fees and Payments. The Consultant agrees that it will provide all equipment, furnish all materials, except as may be otherwise noted in the Attachment A.
4. This Task Order will become effective on the date of full execution by authorized representatives of the Parties and remain in effect until the earlier of: termination of this Agreement; completion of the tasks set forth in Attachment A.
5. Copies of applicable local, state and federal permits required to perform the Services described in Attachment A are attached to this Task Order, unless the Consultant previously provided the appropriate permits to the District.
6. The Consultant shall perform all Services described in Attachment A to this Task Order in accordance with the terms and conditions of the Agreement.

7. Prevailing Wage Requirements

- A. The Scope of Services described in this Task Order is considered by the District to be "Public Works" requiring the payment of prevailing wages. See the Revised Standard On-Call Consultant Agreement, Section Four, Fees and Payments, subsection 3. Prevailing Wages.
- B. In accordance with prevailing wage laws, the Director of the California Department of Industrial Relations (Director) has ascertained the general prevailing rate of wages and employer payments for health and welfare, pension, vacation, and similar purposes available to the particular craft, classification, or type of workers employed on the Project. These rates are set forth in the latest determination obtained from the Director, which is on file in the District's Office of the Clerk of the Board of Directors and incorporated herein by reference the same as though set forth in full. The rates are also available on the State of California Department of Industrial Relations website at <http://www.dir.ca.gov>.

8. Signatures:

Signature:	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">DocuSigned by:</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Mahvash Harms</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">09BF34E77C9227</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">ON BEHALF OF THE CONSULTANT</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Mahvash Harms, S.E.</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Principal</div>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">11/30/2021</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">DATE</div>
Signature:	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">DocuSigned by:</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Heath McMahon</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">09F2E1708C2D418</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">SANTA CLARA VALLEY WATER DISTRICT</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Heath McMahon, P.E.</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Deputy Operating Officer</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Water Utility Capital Division</div>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">12/1/2021</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">DATE</div>

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Structural Engineering and Architectural Design Services

Structural Design of Coyote Percolation Dam Replacement

PROJECT DESCRIPTION- Coyote Percolation Dam Replacement

The purpose of the Coyote Percolation Dam Replacement Project (Project) is to replace the existing steel flashboard dam with an inflatable bladder dam to accommodate increased flow release from the upgraded Anderson Dam outlet facilities and to improve the existing fish ladder stationary panels with either adjustable panels or vertical slot fishways to improve fish passage during low water level events. The existing steel flashboard dam and fish ladder are located at the Coyote Percolation Pond, an in-stream pond used for groundwater recharge in Coyote Creek located just north of Metcalf Road in South San Jose, 11 miles downstream of Anderson Dam.

Project Background

The Project site is located southwest of Highway 101 and northeast of Monterey Road (Figure 1). The Project site could be accessed from existing Valley Water easements via Monterey Road, Metcalf Road, and Forsum Road. Surrounding land uses in the area are combination of residential housing and industrial business.

Under the Anderson Dam Federal Energy Regulatory Commission Order Compliance Project (FOCP), a new outlet system composed of a tunnel, an outlet pipe, and an energy dissipation structure (Anderson Dam Tunnel Project or ADTP), is proposed to safely pass larger inflows up to 2000 cubic feet per second (cfs). The new tunnel will operate alongside the existing outlet structure that can pass from 300 to 500 cfs depending on the reservoir elevation, resulting in a maximum reservoir release of 2,500 cfs. Operation of the proposed ADTP would result in flows beyond the safe operating limit of the Coyote Percolation Dam, which has two radial gates that can pass a flow of 800 cfs before backwater builds up in the pond and starts overtopping the flashboard dam. Proposed releases of 2,500 cfs to maintain the FERC-directed reservoir elevation would overwhelm the Coyote Percolation Dam facilities.

Removing the dam altogether, in anticipation of higher flows would compromise Valley Water's ability to recharge the groundwater basin. To protect against potential reduction in managed groundwater recharge and risks to water supply reliability, the existing steel flashboard dam would be replaced with an inflatable bladder dam. The inflatable bladder dam could be deployed when inflows are low to enhance percolation in the pond. Conversely, the bladder dam could be quickly deflated to allow higher flow events to pass safely. Completion of the bladder dam facilities would be required by December 2023, when the Anderson Dam Tunnel Project would be finished, to minimize the impacts to water supply, groundwater recharge, and aquatic species and habitats.

Project Objectives

The Project would address problems associated with the operation of the existing steel flashboard dam and fish ladder by achieving the following main objectives:

- Maximize the use of the pond without increasing the risk of flooding by efficiently and safely deflating the bladder dam during high flow events
- Preserve Valley Water's ability to impound water and maximize percolation into the groundwater basin

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- Improve fish passage during low pond level events by replacing existing stationary panels in the fish ladder with either adjustable panels or vertical slot fishways
- Improve fish passage over the dam during higher flows by lowering the new slab elevation to approximately El. 222.0 feet (top of slab) and widening the slab by approximately 5 feet. At each end of the dam, the slab will be sloped at 2.5 to 1 (Horizontal to Vertical) to accommodate the form of the rubber dam.
- Perform operations and maintenance in a more environmentally sensitive manner by minimizing the need for instream construction equipment or activities.

Dewatering and Site Preparation

The work area would be isolated and dewatered by installation of temporary upstream and downstream cofferdams made of impermeable, earthen material and dewatering pumps, as needed. A temporary pipeline will convey up to 20 cfs of creek water around the work area and through the radial gates opening by gravity flow. At the direction of a qualified fisheries biologist, the pipeline inlet will be screened to block fish. The inlet screen will be designed for easy and safe access for blockage cleaning. Following installation of the cofferdams and pipeline system and prior to any pumping within the work area, a qualified fisheries biologist will collect and relocate any fish to a suitable area downstream from the work area. A pump will be installed to divert flows upstream from the work area into Pond 10A wetland area to maintain habitat requirements. In addition, the dewatering system will be inspected daily during the construction period and surplus materials will be stored on site for repairs if necessary.

Construction

After the work site has been isolated and dewatered, work would involve removal of the existing metal flashboard dam, demolition of existing concrete foundation and sill, removal of existing fish ladder stationary panels, demolition of existing north abutment wall, extension and modification of existing abutment wall and fish ladder channel wall, construction of new concrete dam foundation, installation of the new inflatable bladder dam, installation of either new adjustable panels or reinforced concrete vertical slot fishways and installation of removable panels in the existing fish ladder channel. A new underground power line from Forsum Road, a new control building and a new retaining wall located south of the radial gates would also be installed and constructed. Construction would be scheduled between June and October 2023. See Figure 2 for proposed Project Site.

There would be three access points to the Project site. Entrance to the east bank of Project site would be through a Valley Water gate at Metcalf Road, then along an existing Valley Water access easement; entrance to the west bank of the Project site would be through a Valley Water gate at Monterey Road, then along an existing Valley Water access easement; and at Forsum Road then along an existing Valley Water access easement to the Project site.

Primary construction staging area would be near the east bank of the Project site on an existing gravel turnabout driveway adjacent to the existing dam on Valley Water property. Alternate construction staging areas would be east of the Project site on clear area immediately adjacent to an entrance gate to Valley Water property and on clear area on County property adjacent to an existing Valley Water access easement. The construction staging areas would allow for

Structural Engineering and Architectural Design Services

Structural Design of Coyote Percolation Dam Replacement

vehicle parking, equipment storage, and construction staging. Construction equipment would include backhoe loaders, compactors, concrete trucks, concrete pump, water truck, dump trucks, flatbed truck, bobcat, and cranes.

Bladder Dam and Control System

Proposed bladder dam would be approximately 140 feet long by 11 feet high when inflated and would be constructed of heavy duty, vandal-proof material. Exact height of the bladder dam would be determined based on the height of the new concrete foundation/sill. The dam would be held in place by a double anchoring bolt system that would be embedded in the concrete foundation and side walls. Air would be supplied to and evacuated from the bladder dam by two blowers, which are controlled from the electrical control panel. The two blowers and control system would be located inside a proposed control building. Sensor and air inlet and outlet pipes from the control building to the bladder dam would be installed underground and surface mounted to cross over the existing radial gates and fish ladder areas. Pipe penetrations would be core drilled through the fish ladder channel wall to the bladder dam.

Concrete Foundation/Sill and Side Wall Modifications

The existing flashboard dam concrete foundation and sill would be demolished and a new concrete dam foundation slab will be rebuilt as required for the new bladder dam system. The new concrete dam slab would also include a downstream maintenance slab for access to maintaining the fish ladder. The existing fish ladder channel wall (creek side) would be modified to accommodate the sloped rubber dam and new anchoring system. The existing abutment wall along the east bank would be demolished and rebuilt to accommodate the sloped rubber dam and the new anchoring system. Existing trees may need to be removed or branches may need to be trimmed for the new east sloped abutment wall. Design of the dam anchoring system, foundation slab, and side walls is dependent on the final height of the bladder dam and the condition of the existing concrete facilities. The new dam foundation will also need to control underseepage as determined by the geotechnical engineer (Cal Engineering & Geology).

Control Building and Site Improvements

An equipment control building approximately 21 x 23 feet would be constructed at the west bank adjacent to the maintenance gate access area. The control building will house the blowers, electrical control panel, control system and accessories, and power sub-panel. The concrete block building will be constructed on a newly installed concrete slab and foundation. The top of the concrete slab will be designed to be above the 500-year flood level. The construction of the building slab foundation will require construction of a new retaining wall due to the building located along the side slope of the existing levee. The retaining wall is approximately 75 feet long and will vary in height between 7 and 16 feet. Excavation and removal of existing bushes and possibly some trees along the slope is anticipated. Landscaping may be required to replace the removed bushes and vegetation. The control building will be surrounded by 8-foot high metal fencing for security. Additionally, security lighting and cameras will be installed. The existing public viewing bench will be relocated to accommodate installation of the control building. Existing chain link fencing will need to be realigned and/or replaced with security metal fencing.

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Structural Design of Coyote Percolation Dam Replacement

Electrical Power Source

Electrical power source would be supplied from an existing 200-amp service located on Forsum Road, approximately 530 feet west of the proposed control building. An existing 50-amp subpanel currently supplies power to the existing equipment and will remain. A new 50- to 100-amp subpanel will be installed inside the proposed control building to supply power to the new bladder dam blower/control system and accessories, fish ladder panels, security lighting, and cameras. A trench will be excavated for installation of the new electrical line from the proposed control building to the service meter at Forsum Road. Trench backfilled and site restoration will occur upon completion. A utility easement has been acquired from the County of Santa Clara to accommodate installation of the new underground electrical line.

Fish Ladder Modifications

To provide wider range of flows for the fish passage, improvements to the facility will improve fish ladder operations and fish passage when the inflatable dam is lowered.

To improve fish passage in the fishway, the existing wooden stationary panels and sluice gate/weirs at the upper eight pools would be removed and replaced with either double adjustable panels or vertical slot fishways. If adjustable panels are chosen, then the existing fixed wooden stationary panels at the lower pools would also be removed and replaced with removable panels. Valley Water has retained Stillwater Sciences to evaluate the feasibility of the adjustable panels or the vertical slot fishways; however, the structural consultant should consider each option in their scope of work. Flows to the fishway chute would be stopped temporarily to remove the existing panels and replace them with adjustable gates/weirs. A stop-block device would be installed at the entrance to the fishway to dewater it and allow completion of the modification work in a safe manner.

Additional modifications may be required based on further technical analysis and studies.

Bladder Dam Operations Plan

One of the advantages of the inflatable bladder dam is that when high stream flows in Coyote Creek are expected, the dam can be completely deflated either automatically or manually allowing the water to pass without concern about upstream flooding due to the dam's impeding of the water. This dam also allows for a much more convenient and operable system than the existing steel flashboard dam system.

The inflatable dam will maintain baseline conditions for routine groundwater recharge and fish passage operations. Flows up to 50 cfs will pass through the fish ladder. If the water surface elevation reaches 6 inches below the top of the dam when inflated, the radial gates will be opened. The procedure for raising and lowering the dam will be based on manufacturer's recommendations and specific site conditions as described herein.

The inflatable dam will be lowered during high flow events to pass tunnel releases from the Anderson Dam site when storm flows are expected to be higher than those that can safely pass through the facility's fish ladder and radial gates. When the dam is deflated, it will also allow pond maintenance activities including sediment flushing and removal of invasive species.

Structural Engineering and Architectural Design Services

Structural Design of Coyote Percolation Dam Replacement

A water elevation gauge for the bladder dam system will be located in the percolation pond. This gauge measures the upstream water level and sends a signal to the electric control panel. If the water level gets too high above the dam, the control panel is programmed to automatically deflate the bladder dam. The dam can also be manually deflated by the operator. Operators will deflate the dam depending on site conditions including weather and stream flow conditions.

The inflatable dam facility will be capable of passing fish migration pulse flows through the fish ladder and radial gates. Conducting pulse flows will not require deflating the dam. Pulse flows of 60 cfs may occur over seven days for outmigration and 90 cfs over 10 days for up-migration. Draining the pond may be necessary prior to the pulse flow event. Changing the state of the dam will be done depending on site specific conditions.

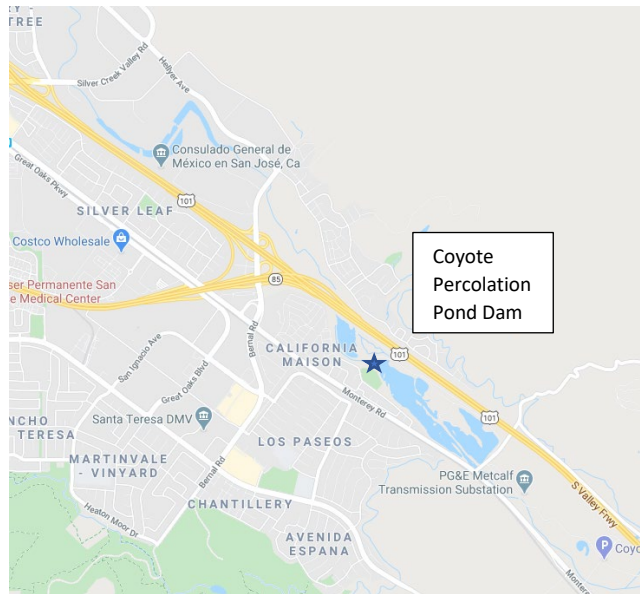


Figure 1. Project Location Map

Structural Engineering and Architectural Design Services

Structural Design of Coyote Percolation Dam Replacement



Figure 2. Proposed Project Site

Proposed Structural Scope of Work for On-call Consultant

The proposed structural scope of work for the on-call consultant is to support the structural aspects of the project.

Note that Valley Water and the National Marine Fisheries Service are performing a fish passage study at this time. Any changes by Valley Water and NMFS to modify the structural design will be communicated to the Consultant.

1. Design
 - a. Demolition
 - i. Flashboard Dam
 - ii. Existing Dam Slab
 - iii. North Abutment
 - iv. Flashboard panels in Fish Ladder
 - v. Grouted rip rap section downstream of dam
 - b. New Facilities (60%, 90%, and Final design submittals)
 - i. Structural design of a new bladder dam slab and cutoff wall (for seepage), and sidewalls to accommodate the bladder dam
 - ii. Review and incorporate anchoring system design into plans (loads provided by bladder dam vendor)
 - iii. Structural design of a new control building. BCA will use the Dahlin Group as an architectural subconsultant to design the control room roof flashing and waterproofing, the noise reducing roof, and provide input on the roof design.

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- iv. Structural design of retaining wall at control building
 - v. Structural design of adjustable panels if recommended by Stillwater (supplemental services)
 - vi. Structural design of single removable panel if recommended by Stillwater (supplemental services)
 - vii. Structural design of new panel supports for double adjustable panels and single removable panels in the fish ladder (supplemental services)
 - viii. Structural design of vertical slot fishways if recommended by Stillwater (supplemental services)
 - ix. Structural plans, details, specifications and engineer's estimate at 60%, 90% and Final design phases (supplemental services)
2. Structural Engineering Services during Construction
- a. Respond to structural RFI's
 - b. Review and comment on contractor submittals for structural engineering
 - c. Design changes during construction
 - d. Periodic site visits

DETAILED SCOPE OF WORK

TASK 1 – PROJECT MANAGEMENT

1.1 Contract Administration

The Consultant will prepare a Task Order (TO) for the work to be done as per Section Twelve, #13 of the "Standard On-Call Consultant Agreement", using Appendix Three to the "Standard On-Call Consultant Agreement" Task Order Template. The Consultant will also prepare a project schedule for this TO, a table with the consultant's fee estimate for this Task Order.

The Task Order, Project Schedule, and the fee estimate will require the District's approval and the District reserves the right to reject any of these.

1.2 Meetings

The consultant will participate in virtual meetings with the SCVWD as needed for project coordination (6 meetings assumed).

Deliverables:

- 1. Task Order
- 2. Project Schedule
- 3. Fee Estimate Table
- 4. Monthly invoices with Monthly Progress Reports

TASK 2—60% DESIGN (Unchecked Plans and estimate)

2.1 60% Plans

Develop all structural and architectural plans including all needed details and sections.

2.2 60% Construction Cost Estimate

Prepare the Structural and architectural Construction Cost Estimate.

Structural Engineering and Architectural Design Services

Structural Design of Coyote Percolation Dam Replacement

Deliverables

1. 60% Structural and architectural Plans
2. 60% structural and architectural Construction Cost Estimate (PDF and Excel format)

TASK 3— 90% DESIGN (Checked Plans, Specifications and Estimate)

Consultant will incorporate District review comments on the 60% plans and will update the 60% structural and architectural design submittal to 90% design level and provide plans, technical specifications, and construction cost estimate. Specifications are required in Water District format. The Water District will provide the Consultant with samples to review and edit as needed.

3.1 Internal Quality Control Review

Consultant will perform an internal Red-Yellow-Green Quality control review of the Plans, Calculations Quantities and estimate. Also, perform field walk through to determine if any field conditions conflict with 65% design plans. Provide the District with field notes from the field walk through.

3.2 90% Plans

Update and provide set of structural and architectural plans with all required details.

3.3 90% Technical Specifications

Provide a set of structural and architectural technical specifications for structural specification sections only.

3.4 90% Construction Cost Estimate

Update and provide the Structural and architectural Construction Cost Estimate.

3.5 Design Calculations

Provide design analysis and calculations for 90% structural design of this work.

Deliverables

1. 90% Structural Plans
2. 90% Structural and architectural Technical Specifications
3. 90% structural and architectural Construction Cost Estimate (PDF and Excel format)

TASK 4—FINAL DESIGN

Consultant will incorporate District review comments on the 90% plans and will update the 90% structural and architectural design submittal to the design level and provide plans, technical specifications, construction cost estimate and the design analysis and calculations.

4.1 Final Plans

Update and provide a set of structural and architectural plans with all required details.

4.2 Final Technical Specifications

Update and provide a set of structural and architectural technical specifications for the structural and architectural specification sections only design. BCA to perform a cursory of the overall/complete specification package.

Structural Engineering and Architectural Design Services

Structural Design of Coyote Percolation Dam Replacement

4.3 Final Construction Cost Estimate

Update and provide the Structural and architectural Construction Cost Estimate.

4.4 Final Design Calculations

Provide design analysis and calculations for final structural design of this work.

Deliverables

1. Final Structural and Architectural Plans Stamped and electronically signed (electronic files)
2. Final Structural and Architectural Technical Specifications (WORD format)
3. Final structural and architectural Construction Cost Estimate (PDF and Excel format)
4. Final Structural design Calculations Stamped and signed (1 hard copy)

TASK 5—BID SUPPORT

The Consultant will assist the District, as requested during the bidding. Such assistance may include answering questions, interpretations of contract documents related to structural and architectural engineering design work, preparing addenda, etc.

TASK 6—Supplemental Services

6.1 Design and detail the Vertical slot fish ladder weirs.

6.2 Design and detail structural the support for adjustable panel at fish ladder inlet.

6.3 Miscellaneous additional scope from agency review

Consultant will incorporate revisions resulting from review comments from various stakeholders and oversight agencies

ASSUMPTIONS

1. All structure plans will be drafted using AutoCAD.
2. Civil, geotechnical, hydraulic, environmental and permitting services are not included.
3. Testing for hazardous soil, or asbestos in exiting concrete structures are not included.
4. It is assumed that no liquefaction or lateral spreading exist at the dam location.
5. Hydraulic analysis is not included.
6. Potential scour at the dam handled by SCVWD.
7. The structural plans will be based on topo/survey data and drawings provided by SCVWD.
8. The structure plans produced by BCA will be inserted into the plans produced by the SCVWD for the overall project. SCVWD will prepare the project title sheet.
9. The type of anchor, anchor spacing and the anchor loads for the air bladder dam anchorage design will be provided by the dam supplier. The bladder dam supplier to provide a summary table of the anchor loads, stamped and signed by a registered engineer in the state of California. Anchor bolt design, and details to be provided on structural sheets and signed by Biggs Cardosa structural engineer.
10. The architectural layout of the control building (footprint, height, door locations and size, louver locations and sizes) will be supplied by the SCVWD.

Structural Engineering and Architectural Design Services

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11. Consultant to provide structural and architectural design only, mechanical design and electrical design by others
12. Cost estimates includes structural and architectural work only.
13. The depth of any elements that may be required to prevent seepage or scour, such as designing the depth of cut off wall to prevent seepage, or depth of sheet piling below the cut off wall to prevent seepage, are not included in this scope. After the geotechnical engineer provides the depth of the cut of wall and sheet piling for seepage, BCA will design and detail the cut off wall and sheet piling wall. Any seepage loading the sheet piling needs to be designed to resist will be provided by the geotechnical engineer. The geotechnical engineer also will provide geotechnical data needed to design the sheet piling to resist the seepage loading.
14. Determining the condition and effectiveness of existing sheet piling below the existing dam slab, and designing new sheet piling below the sloped sidewalls is not in the scope.
15. The geotechnical engineer to review the final plans and provide input on the geotechnical related specs.
16. Structural design of the support for one type of adjustable panel at the fish ladder is included in the scope.
17. Structural design of vertical slot fishways is included in the scope

ESTIMATED SCHEDULE

- 12/3/21 Notice to Proceed
- 1/28/22 60% Design Submittal
- 3/14/22 Receive Review Comments from SCVWD
- 6/17/22 90% Design Submittal
- 7/22/22 Receive Review Comments from SCVWD
- 9/23/22 Final Design Submittal

APPENDIX A
SCVWD

TASK ORDER No. 09 Structural and Architectural Design of Coyote Percolation Dam Replacement - FEE ESTIMATE

Date: Rev 11/10/2021

Staff Person-Hour Breakdown: Biggs Cardosa Associates												
Task	Principal	QA/QC Manager	Engr. Manager	Senior Engineer	Project Engineer	Staff Engineer	Assistant Engineer	Junior Engineer	CADD Drafter	Admin.	Total Hours	Total Dollars
Rate	\$290.33	\$220.44	\$193.55	\$172.05	\$155.92	\$129.04	\$118.28	\$102.15	\$134.41	\$91.40		
Task 1: Project Management	6	0	26	10	0	0	0	0	0	0	42	\$8,494.78
1.1 Project Management and Coordination	4		16								20	\$4,258.12
1.2 Meetings (6 meeting assumed)	2		10	10							22	\$4,236.66
Task 2: 60% Design Submittal	7	0	71	112	0	274	0	0	110	1	575	\$85,277.42
2.1 Prepare 60% Plans												
Perform Structural Calculations												
Design foundation slab & anchor bolt desgin	3		12			50					65	\$9,645.59
Extend south wall 4'			2			10					12	\$1,677.50
Check & Modify south support wall			4			20					24	\$3,355.00
Design sheet piling below cut off wall			4			16					20	\$2,838.84
Control building				40							40	\$6,882.00
Control building/Mechanical anchorage				24							24	\$4,129.20
Control building retaining wall			4			16					20	\$2,838.84
Markup/Draft plans (10 sheet assumed)	3		24	40		100			110		277	\$40,087.29
Coordinate with geotechnical engineer			4			4					8	\$1,290.36
Coordinate with dam supplier			4			4					8	\$1,290.36
Coordinate with SDVWD			4			4					8	\$1,290.36
2.2 Prepare 60% construction cost estimate											0	\$0.00
Perform quantities			4	8		24					36	\$5,247.56
Determine unit prices			2			12					14	\$1,935.58
Prepare estimate	1		2			10					13	\$1,967.83
Prepare submittal			1			4				1	6	\$801.11
Task 3: 90% Design Submittal	1	17	62	26	118	146	0	0	24	10	404	\$61,889.45
3.1. Quality Control Review (RYG Checks)											0	\$0.00
Field Walk through and field notes memo.	1	4	8			10					23	\$4,010.89
Calculation Package Review		6			40						46	\$7,559.44
Plan Review		6			50						56	\$9,118.64
Quantities and Estimate Review		1			20						21	\$3,338.84
3.2 Update Plans			8			16			24		48	\$6,838.88
Provide responses to SCVWD comments			16	16	8	40					80	\$12,258.56
3.3 90% Technical Specifications			4	10		24				8	46	\$6,322.86
Coordinate with Geotechnical engineer			2			4					6	\$903.26
Quality Control Review (RYG) Technical Specifications Review			16								16	\$3,096.80
3.4 Update Construction Cost Estimate			2			8					10	\$1,419.42
3.5 Update Structural Calculations			4			32					36	\$4,903.48
Prepare submittal			2			12				2	16	\$2,118.38

APPENDIX A
SCVWD

TASK ORDER No. 09 Structural and Architectural Design of Coyote Percolation Dam Replacement - FEE ESTIMATE

Date: Rev 11/10/2021

Staff Person-Hour Breakdown: Biggs Cardosa Associates												
Task	Principal	QA/QC Manager	Engr. Manager	Senior Engineer	Project Engineer	Staff Engineer	Assistant Engineer	Junior Engineer	CADD Drafter	Admin.	Total Hours	Total Dollars
Rate	\$290.33	\$220.44	\$193.55	\$172.05	\$155.92	\$129.04	\$118.28	\$102.15	\$134.41	\$91.40		
Task 4: Final Design Submittal	1	0	10	0	0	64	0	0	4	4	83	\$11,387.63
4.1 Update Plans			2			8			4		14	\$1,957.06
Provide responses to SCVWD comments	1		4			40					45	\$6,226.13
4.2 Update Technical Specifications			1			4				2	7	\$892.51
4.3 Update Construction Cost Estimate			1			4					5	\$709.71
4.4 Update Structural Calculations			1			4					5	\$709.71
Prepare submittal			1			4				2	7	\$892.51
Task 5: Bid support	2	0	2	0	0	6	0	0	0	0	10	\$1,742.00
5.1 Bid support	2		2			6					10	\$1,742.00
Task 6: Supplemental Services	8	0	48	32	0	132	0	0	42	0	262	\$39,797.14
6.1 Vertical slot weirs for fish ladder			4	6		16			6		32	\$4,677.60
6.2 Structural design of the support for adjustable panel			4	6		16			6		32	\$4,677.60
6.3 Miscellaneous additional scope from agency review (15% of total design budget)	8		40	20		100			30		198	\$30,441.94
Dahlin Group Architecture Subconsultant (1)											50	\$9,710.00
Reimbursables												\$701.58
TOTAL HOURS	25	17	219	180	118	622	0	0	180	15	1426	
TOTAL DESIGN SERVICES	\$7,258.25	\$3,747.48	\$42,387.45	\$30,969.00	\$18,398.56	\$80,262.88	\$0.00	\$0.00	\$24,193.80	\$1,371.00		\$219,000.00

(1) For Dahlin Group fee proposal breakdown, see attached Appendix B.

APPENDIX B
Dahlin Group - Architectural Design

Date:	11/9/2021
Project Name:	Coyote Dam Control Room
Location:	Morgan Hill, CA
Client Name:	Biggs Cardosa
Project #:	

	President, VP, Founder	Sr Principal, Sr Director	Principal, Director	Sr. Architect III, Sr. Designer III, Sr. Project Manager III, Sr. Planner III, Sr. Interior Designer III	Sr. Associate	Sr. Architect II, Sr. Designer II, Sr. Project Manager II, Sr. Planner II, Sr. Interior Designer II	Associate	Sr. Architect, Sr. Designer, Sr. Project Manager, Sr. Planner, Sr. Interior Designer	Architect II, DesignerII, Project Manager II, Planner II, Multimedia Designer II	Architect, Designer, Project Manager, Planner, Multimedia Designer	Job Captain II, Interior Designer II	Job Captain, Interior Designer	Designer II, Drafter II	Designer, Drafter	Administration II	Administration
TASK	\$300	\$250	\$200	\$190	\$185	\$180	\$175	\$170	\$160	\$150	\$140	\$125	\$115	\$105	\$100	\$85
1.2 Meetings		3														
2.1 & 3.1 Prepare drawings for flashing/water proofing and noise reducing roof		14											16		1	
3.2, 4.1 & 5.1 Respond to Government and Agency Plan Review		2											8		1	
3.3 Project Specifications		6														
5.0 Bidding		2														
TOTAL HOURS/STAFF	0	24	0	0	0	0	0	0	0	0	0	0	24	0	2	0

Total Hours	Labor Budget
3	\$750
31	\$5,440
11	\$1,520
6	\$1,500
2	\$500
50	\$9,710